

## PATENT COOPERATION TREATY

## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2021359PC/or		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/FI 2003/000699	International filing date (day/month/year) 25.09.2003	Priority date (day/month/year) 27.09.2002	
International Patent Classification (IPC) or national classification and IPC H04Q 7/20			
Applicant Nokia Corporation et al			

<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>7</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (sent to the applicant and to the International Bureau) a total of <u>3</u> sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>	
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input checked="" type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input checked="" type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input checked="" type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>	

Date of submission of the demand 22.03.2004	Date of completion of this report 17.01.2005
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## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/FI 2003/000699

## Box No. 1 Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of:

- ☐ international search (under Rules 12.3 and 23.1(b))  
☐ publication of the international application (under Rule 12.4)  
☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1 - 13 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the claims:

pages 14 as originally filed/furnished

pages\* \_\_\_\_\_ as amended (together with any statement) under Article 19

pages\* 15 - 17 received by this Authority on 26.11.2004

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☒ the drawings:

pages 1 - 5 as originally filed/furnished

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

pages\* \_\_\_\_\_ received by this Authority on \_\_\_\_\_

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_  
☐ the claims, Nos. \_\_\_\_\_  
☐ the drawings, sheets/figs \_\_\_\_\_  
☐ the sequence listing (specify): \_\_\_\_\_  
☐ any table(s) related to the sequence listing (specify): \_\_\_\_\_

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages \_\_\_\_\_  
☐ the claims, Nos. \_\_\_\_\_  
☐ the drawings, sheets/figs \_\_\_\_\_  
☐ the sequence listing (specify): \_\_\_\_\_  
☐ any table(s) related to the sequence listing (specify): \_\_\_\_\_

\* If item 4 applies, some or all of those sheets may be marked "superseded."

## Box No. II Priority

1. ☐ This report has been established as if no priority had been claimed due to the failure to furnish within the prescribed time limit the requested:
- ☐ copy of the earlier application whose priority has been claimed (Rule 66.7(a)).
  - ☐ translation of the earlier application whose priority has been claimed (Rule 66.7(b)).
2. ☐ This report has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rule 64.1). Thus for the purposes of this report, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

Priority is considered valid. Therefore, document EP 1 341 391 A1 is of no relevance.

## Box No. IV Lack of unity of invention

1. In response to the invitation to restrict or pay additional fees the applicant has:

- ☐ restricted the claims.  
☐ paid additional fees.  
☐ paid additional fees under protest.  
☐ neither restricted nor paid additional fees.

2. ☒ This Authority found that the requirement of unity of invention is not complied with and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is:

- ☐ complied with.  
☒ not complied with for the following reasons:

The independent claims 1, 9 and 13 lack novelty.

The following separate inventions were identified:

I: Claims 2, 4-7, 10, 12 and 14 directed to a method, a system and a server where a message having one structure for messages is converted to have a structure according to bearer independent protocol and/or vice versa.

I: Claims 3, 8 and 11 directed to a method and a system for using bearer independent protocol when transmitting a message from a sender to a receiver.

4. Consequently, this report has been established in respect of the following parts of the international application:

- ☒ all parts.  
☐ the parts relating to claims Nos. \_\_\_\_\_

**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims	<u>2-5, 7, 8, 10-12, 14, 15</u>	YES
	Claims	<u>1, 6, 9, 13</u>	NO
Inventive step (IS)	Claims	<u>2-5, 7, 8, 10-12, 14, 15</u>	YES
	Claims	<u>1, 6, 9, 13</u>	NO
Industrial applicability (IA)	Claims	<u>1-15</u>	YES
	Claims		NO

**2. Citations and explanations (Rule 70.7)**The claimed invention

The present invention aims to solve the problem of transmitting a message having a first structure for messages to a receiver to a second system having a second structure for the messages. By utilising a bearer independent protocol, the transmission can be achieved.

Reference is made to the following documents:

D1: WO0215603 A2

D2: WO0056091 A1

D3: WAP WDP Version 05-Nov-1999: "Wireless Application Protocol; Wireless Datagram Protocol Specification". WIRELESS APPLICATION PROTOCOL FORUM LTD, November 1999.

D4: EP0854655 A2

D1 describes a method for sending a short message between a sender and receiver independent of operator, location, and network protocols in a mobile communication system, (abstract, claim 21). A user of a terminal may use a WAP (wireless application protocol) phone using the WWW to connect and send a message through the server to a mobile network operator to an end user on the SMS phone or other type of cellular device, (page 7 lines 7-10).

D1 solves the above defined problem, which the present invention aims to solve.

.../...

## Supplemental Box

In case the space in any of the preceding boxes is not sufficient.  
Continuation of: BOX V

D2 discloses a method and apparatus for interconnecting a first network using a first SMS message protocol and a second network using a second SMS message protocol to enable SMS message transmissions between the first and second networks (abstract).

D3 and D4 are considered to merely disclose the state of the art and are not commented on further.

Reasoned statement

Thus, D1 describes a method and apparatuses for transmitting a messaging service message from a sender in a first system, (e.g. GSM) having a first structure for messages, to a receiver of a second system (e.g. CDMA) having a second structure for the messages (e.g. CDMA), (page 2, lines 1-10) by utilising a bearer independent protocol in the transmission of the message, (page 7 lines 8-9).

The subject-matter of claims 1, 6, 9 and 13 does not differ from D1. Therefore, claims 1, 6, 9 and 13 lack novelty.

**Box No. VI - Certain documents cited****1. Certain published documents (Rule 70.10)**

Application No. Patent No.	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
EP1341391 A1, P	03.09.2003	25.02.2003	28.02.2002
WO03090486 A1, E	30.10.2003	22.04.2003	22.04.2002

**2. Non-written disclosures (Rule 70.9)**

Kind of non-written disclosure	Date of non-written disclosure (day/month/year)	Date of written disclosure referring to non-written disclosure (day/month/year)
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ing to the bearer independent protocol;

converting (2-3) the received message from the bearer independent protocol structure to the second structure; and

transmitting the converted message from the server to the receiver's  
5 equipment.

6. A method according to claim 1 **characterized** by further comprising:

receiving the message having the bearer independent protocol structure in a server comprising an application according to the bearer inde-  
10 pendent protocol;

converting (4-3, 5-3) the message to have the second structure; and  
transmitting the converted message from the server to the receiver's equipment.

7. A method according to claim 5 or 6, **characterized** by further  
15 comprising:

supporting the bearer independent protocol in receiver's equipment;  
and

if the message transmission of the converted message fails:

converting (14-4) the message to have a structure of the bearer in-  
20 dependent protocol; and

transmitting the message from the server to the receiver's equip-  
ment according to the bearer independent protocol.

8. A method according to claim 2, 3, 4, or 7, **characterized**  
by the transmission of the message having a structure of the bearer independ-  
25 ent protocol including:

storing (7-3, 8-3) the content of the message;

sending (7-4, 8-4) an address of the content to the receiver's  
equipment; and

reading the content by using the address.

9. A telecommunication system (SA1, SA2) comprising at least  
30 a first system (1) having a first structure for messaging service mes-  
sages;

a second system (2, 2') having a second structure for the mes-  
sages; and

35 a server (12, 22) via which a message is transmitted from the first  
system to the second system;



**characterized** in that the server (12, 22) is configured to utilize a bearer independent protocol for transmitting the message.

10. A telecommunication system (SA1, SA2) according to claim 9, **characterized** in that the first system (2) comprises a network node (SMSC) having functionality related to messaging services within the first system, the network node being configured to recognise the message sent to the second system and forward the message to the server.

11. A telecommunication system (SA1, SA2) according to claim 9 or 10, **characterized** in that the first system (1) comprises at least user equipment (TS) which comprises a sender application using the bearer independent protocol for sending messages according to the bearer independent protocol, the user equipment being configured to start the sender application in response to the message targeted to the second system.

12. A telecommunication system according to claim 9 or 10, **characterized** in that the system comprises another server (12, 22) configured to utilize a bearer independent protocol for transmitting the message, one of the servers being a first server (12) via which the message is transmitted from a sender in the first system to the second system and the other one being a second server (22) via which the message is transmitted from the first system towards a receiver in the second system,

the first server (12) is configured, in response to receiving the message having the first structure, to convert the message to have a structure according to the bearer independent protocol, and send the converted message to the second server, and

the second server (22) is configured, in response to receiving the message having a structure according to the bearer independent protocol, to convert the message to have the second structure before forwarding the message to the receiver.

13. A server (12, 22) in a telecommunication system comprising a first system having a first structure for messaging service messages and a second system having a second structure for the messages, wherein a message from the first system to the second system is transmitted via the server, **characterized** in that the server (12, 22) is configured to utilize a bearer independent protocol for the message.

14. A server (12, 22) according to claim 13, **characterized** in that the server is configured, in response to receiving the message having the

first structure, to convert the message to have a structure according to the bearer independent protocol before forwarding the message.

15. A server (12, 22) according to claim 14, **characterized** in that the server (12, 22) is configured, in response to receiving a message having a structure according to the bearer independent protocol, to convert the message to have the second structure before forwarding the message.
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